**LPDES PERMIT NO. LA0005487, AI No. 2367**

**LPDES FACT SHEET and RATIONALE**
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

**I. Company/Facility Name:** Syngenta Crop Protection, Inc.
St. Gabriel Facility
Post Office Box 11
St. Gabriel, Louisiana 70776

**II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

**III. Prepared By:** Heather Babin
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**Date Prepared:** March 10, 2005

**IV. Permit Action/Status:**

A. Reason For Permit Action:

Proposed reissuance of an expired Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

B. LPDES permit LA0005487 issued to Ciba-Geigy Corporation
LPDES permit effective date: January 15, 1991
LPDES permit expiration date: January 14, 1996
EPA has not retained enforcement authority.

C. LWDPS permit WP0956 issued to Ciba-Geigy
LWDPS permit effective date: September 18, 1991
LWDPS permit expiration date: September 17, 1996

D. LPDES permit LA0095478 issued to Zeneca Ag Products, Inc.
LPDES permit effective date: March 1, 1998
LPDES permit expiration date: February 29, 2003

E. Previously, Zeneca was part of ICI America that was issued LWDPS permit number WP0765 on April 28, 1992. ICI retained permit number WP0765.

In a letter Lamberth (Ciba-Geigy) to Levy (LDEQ) dated December 18, 1996, Ciba-Geigy Corporation informed LDEQ of its merger with Sandoz Corporation and its related name change to Novartis Crop Protection, Inc. (Novartis). All discharges from the pesticide and dyestuff manufacturing facility continued to be authorized under LA0005487. On March 13, 1997, the textiles/dyes production facility spun-off from Novartis becoming part of Ciba-Specialty Chemicals Corporation (letter Dunner {Ciba-Specialty} to Levy {LDEQ} dated September 8, 1997). In 1997, the dyestuffs manufacturing activities and discharges from Outfall 003 (previously permitted under LA0005487) were separated into Ciba-Specialty Chemicals, receiving a new LPDES permit (LA0104400). On January 1, 2001, Zeneca merged into Novartis. Then Novartis changed its name to Syngenta Crop Protection, Inc. Discharges from the facility are currently authorized under both LA0005487 and LA0095478. This proposed draft permit will combine all the outfalls into one LPDES permit, LA0005487 and terminate LA0095478.

F. Ciba-Geigy Corporation submitted a permit renewal application for LA005487 on July 17, 1995 for the facility that would become Novartis. However, the permit was not issued due to the pending merger with Zeneca. Additional information was submitted on April 3, 1997; February 27, 1998; September 24, 1999; March 24, 2000; May 11, 2000; April 6, 2001; and October 29, 2001. A revised renewal application was submitted by Syngenta on February 27, 2003, which included or referenced information provided in the previous submittals. An application addendum was submitted by Syngenta on March 31, 2004, which included characterization data of proposed new outfalls data and updates to previously submitted characterization information.

## V. Facility Information:

A. Location - 3905 Highway 75 in St. Gabriel

B. Applicant Activity - According to the application, Syngenta Crop Protection, Inc., St. Gabriel Facility, manufactures, formulates, and packages pesticides, intermediates, and specialty chemicals. Specific processes include:

1. manufacture and formulation of s-triazine pesticides
2. manufacture of hydrogen cyanide as raw material
3. manufacture, formulation, and packaging of various pesticides, specialty chemicals, and intermediates
4. manufacture of herbicide safeners
5. formulation of corn herbicides, insecticides, and premixes, and trade name herbicide and insecticide products; and
6. supportive activities which include wastewater treatment systems, maintenance, utilities, analytical and quality control laboratories.

The manufacture of various chelating agents, known as Sequestrene, was shut down at the beginning of 2004. Process development pilot-scale activities had previously been shut down, and now process development activities are limited to lab scale experiments.

The facility has an injection well on site. Approximately 10,000 gpd of non-hazardous wastewater is injected, of which 100 gpd is stormwater from the curbed process areas. The rest of this volume is utility and process wastewater.

Syngenta currently accepts wastewaters from similar Syngenta pesticide/herbicide production facilities, which are disposed of in the Syngenta Multi-purpose incinerator. These wastewaters are consistent with streams generated at the St. Gabriel Plant that are currently treated in the facility wastewater treatment systems.

C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401-402, and 404-471 have been adopted by reference at LAC 33:IX.4903)

| Guideline | Reference |
|---|---|
| Organic Chemicals, Plastics, and Synthetic Fibers<br>Process Flow - 0.25 MGD | 40 CFR 414, Subparts G and J |
| Inorganic Chemicals-<br>Hydrogen Cyanide<br>Daily Production - 242,000 lbs/day | 40 CFR 415, Subpart AP |
| Pesticide Guidelines, Organic<br>Pesticide Mfg.<br>Process Flow - 1.702 MGD | 40 CFR 455, Subparts A and C |

Other sources of technology based limits:
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).
LDEQ Sanitary General Permits
LDEQ Hydrostatic Test Wastewater General Permit
Best Professional Judgement

D. Fee Rate -
1. Fee Rating Facility Type: major
2. Complexity Type: VI
3. Wastewater Type: II
4. SIC code: 2879, 2819, and 2869

E. Continuous Facility Effluent Flow - 5.92 MGD.

## VI. Receiving Waters:

Mississippi River
1. TSS (15%), mg/L: 32
2. Average Hardness, mg/L $CaCO_3$: 153.4
3. Critical Flow, cfs: 141,955
4. Mixing Zone Fraction: 1/3
5. Harmonic Mean Flow, cfs: 366,748
6. River Basin: Mississippi River, Segment No. 070301
7. Designated Uses:
   The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply.

Bayou Braud - subsegment 040201

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation

Information based on the following: Water Quality Management Plan, Volume 5A, 1994; LAC 33:IX Chapter 11;/Recommendation(s) from the Engineering Section. Hardness and 15% TSS data come from monitoring station 319 on the Mississippi River (east of Plaquemine, LA at the Plaquemine Ferry Landing, midstream) listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc.

## VII. Outfall Information:

Outfall 001 - formerly Ciba-Geigy (LA0005487) Outfall 001

A. Type of wastewater - combined treated discharges of Internal Outfall 301 and Internal Outfall 601

B. Location - Discharge to the Mississippi River at Latitude 30°14'43", Longitude 91°06'23".

C. Treatment - pH adjustment

D. Flow - Continuous, (Max 30-Day) 5.92 MGD

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Internal Outfall 301-Phase I - (not in current permits)

A. Type of wastewater - treated process wastewater (including off-site wastewaters of similar processes; streams from the Audubon Sugar Institute; and treated incinerator scrubber water, carbon regeneration furnace (Westvaco) scrubber water, and vent combustor scrubber water) and process area stormwater, utility wastewater, groundwater recovery, and non-process area stormwater.

B. Location - Discharge to the Mississippi River via Outfall 001 at Latitude 30°14'09", Longitude 91°05'53".

C. Treatment:
- breakpoint chlorination
- neutralization
- dechlorination
- sedimentation
- pressure filtration
- carbon adsorption
- activated sludge
- multimedia filtration
- chemical precipitation
- acidification and neutralization

D. Flow - Continuous Flow 2.746 MGD.

| | |
|---|---|
| Process Wastewater* | 2.042 MGD |
| Utility Wastewater* | 0.41 MGD |

* Specific component waste streams are defined at Appendix A-1.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

G. Effluent Data - The effluent data are contained in Appendix C.

Internal Outfall 301- Phase II - (not in current permits)

A. Type of wastewater - treated process wastewater (including off-site wastewaters of similar processes and streams from the Audubon Sugar Institute) and process area stormwater, utility wastewater, groundwater recovery, and non-process area stormwater.

B. Location - Discharge to the Mississippi River via Outfall 001 at Latitude 30°14'09", Longitude 91°05'53".

C. Treatment:
- breakpoint chlorination
- neutralization
- dechlorination
- sedimentation
- pressure filtration
- carbon adsorption
- activated sludge
- multimedia filtration
- chemical precipitation
- acidification and neutralization

D. Flow - Continuous Flow 2.452 MGD.

| | |
|---|---|
| Process Wastewater* | 2.042 MGD |
| Utility Wastewater* | 0.41 MGD |

* Specific component waste streams are defined at Appendix A-2.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

G. Effluent Data - The effluent data are contained in Appendix C.

Outfall 501 - (not in current permits)

A. Type of wastewater - treated sanitary wastewater.

B. Location - Discharge to the Mississippi River via Internal Outfall 601; thence Outfall 001 at Latitude 30°14'38", Longitude 91°06'15".

C. Treatment:
- activated sludge
- disinfection

D. Flow - Continuous, 0.05 MGD.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 601 - (not in current permits)

A. Type of wastewater - non-process area stormwater, stormwater runoff from the East Pond, stormwater from MMU (South Works) area, previously tested treated sanitary wastewater (Internal Outfall 501), various utility water purges (including: cooling tower blowdown, utility water blowdowns, overflow, pipe bleeds, and steam and air condensates

B. Location - Discharge to the Mississippi River via Outfall 001 at Latitude 30°14'30", Longitude 91°06'21".

C. Treatment:
- neutralization
- sedimentation

D. Flow - Intermittent.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 002 - formerly Ciba-Geigy (LA0005487) Outfall 002

A. Type of wastewater - non-process area stormwater.

B. Location - Discharge to Bayou Braud at Latitude 30°14'09", Longitude 91°05'04".

C. Treatment - None

D. Flow - Intermittent

E. Receiving waters - Bayou Braud

F. Basin and segment - Lake Pontchartrain Basin, Segment 040201

Outfall 004 - proposed alternate routing

A. Type of wastewater - treated incinerator scrubber water, carbon regeneration furnace (Westvaco) scrubber water, and vent combustor scrubber water.

B. Location - Discharge to the Mississippi River at Latitude 30°14'43", Longitude 91°06'23".

C. Treatment:
- neutralization
- sedimentation
- pressure filtration

D. Flow - Continuous Flow 0.294 MGD.

| | |
|---|---|
| Process Wastewater* | 0.294 MGD |

* Specific component waste streams are defined at Appendix A-3.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

G. Effluent Data - The effluent data are contained in Appendix C.

Outfall 011 - formerly Zeneca (LA0095478) Outfall 001

A. Type of wastewater - treated sanitary wastewater and cooling tower blowdown.

B. Location - Discharge to the Mississippi River via the Pioneer Chlor-Alkali Company Outfall 002 (LA0005231) at Latitude 30°14'12", Longitude 91°06'01".

C. Treatment:
- activated sludge
- disinfection
- sedimentation

D. Flow - Continuous, 0.01 MGD.

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 012 - formerly Zeneca (LA0095478) Outfall 002

A. Type of wastewater - non-process area stormwater runoff, refrigeration seal flush, steam condensates, hydrostatic test water, utility water drains, overflows, or cooling water from the Syngenta South Works (MMU) facility and Ineos Fluor Americas, LLC

B. Location - Discharge to the Mississippi River via the Pioneer Chlor-Alkali Company Outfall 002 (LA0005231) at Latitude 30°14'17", Longitude 91°05'54".

C. Treatment - neutralization

D. Flow - intermittent

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 013 - formerly Zeneca (LA0095478) Outfall 003

A. Type of wastewater - treated groundwater recovery from the enhanced vapor/liquid extraction system.

B. Location - Discharge to the Mississippi River via the Pioneer Chlor-Alkali Company Outfall 002 (LA0005231) at Latitude 30°14'12", Longitude 91°06'01".

C. Treatment:
- bag filtration
- carbon adsorption

D. Flow - intermittent

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

## VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permits:

A. Outfall 001 - Acute biomonitoring with monitoring 1/year has been added. The technology based limits from Outfall 001 have been removed and placed on Internal Outfall 301. The effluent limitations and monitoring requirements for the treated sanitary wastewater has been removed and placed on Internal Outfall 501. The effluent limitations and monitoring requirements for non-process stormwater and utility water purges have been removed and placed on Internal Outfall 601.

B. New outfall created - Internal Outfall 301. The facility was granted monitoring frequency reductions from 3/week to 1/week for the following: TOC, 2-nitrophenol, benzene, ethylbenze, chlorobenzene, 1,2-dichlorobenzene, 1,4-dichlorobenzene, carbon tetrachloride, methylene chloride, chloroform, chloroethane, and 1,3-dichlorobenzene. The following parameters received monitoring frequency reductions from 1/day to 1/week: TRC and Amenable Cyanide.

C. New outfall created - Internal Outfall 501.

D. New outfall created - Internal Outfall 601.

E. New outfall created - Outfall 004. The commencement of Outfall 004 will begin Phase II.

F. New outfall created - Outfall 011. This was formerly known as Outfall 001 under LA0095478. The monitoring frequency for Oil and Grease, and TOC has been reduced from 1/week to 2/month.

G. New outfall created - Outfall 012. This was formerly known as Outfall 002 under LA00095478. The monitoring frequency for Oil and Grease, and TOC has been reduced from 1/week to 1/ 2 months.

H. New outfall created - Outfall 013. This was formerly known as Outfall 003 under LA0095478. The monitoring frequency for Chloroform, TOC, and Trichloroethylene has been reduced from 1/week to 1/ 2 months.

## IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

### A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

### B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

Several parameters are included in the Organic Pesticide chemicals effluent guidelines under synonyms of the parameter names which are listed in the priority pollutants, the previous permit, EPA Form 2C Part V, and the Minimum Quantification Levels (MQLs). The following table lists these parameters and their synonyms.

| Organic Pesticide Guidelines Name | Priority Pollutants Name |
|---|---|
| bromodichloromethane | dichlorobromomethane |
| bromomethane | methyl Bromide |
| chloromethane | methyl Chloride |
| dibromochloromethane | chlorodibromomethane |
| dichloromethane | methylene chloride |
| tetrachloromethane | carbon tetrachloride |
| tribromomethane | bromoform |
| trichloromethane | chloroform |
| 1,3-dichloropropene | 1,3-dichloropropylene |

1. Outfall 001 - Combination of Internal Outfalls 301, 501, and 601.

Outfall 001 discharges the combination of treated processd wastewaters (Outfall 301), treated sanitary wastewaters (Outfall 501), and non-process area stormwater, and utility purges (Outfall 601). The following limitations shall apply:

Flow - report
pH - continuous recorder
Biomonitoring

2. Outfall 301 - Process Wastewaters

Syngenta Crop Protection, Inc., St. Gabriel Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

| Manufacturing Operation | Guideline |
|---|---|
| Organic Pesticides | 40 CFR 455 Subparts A & C |
| Organic chemical manufacturing | 40 CFR 414, Subparts G and J |
| Inorganic chemical manufacturing | 40 CFR 415, Subpart AP |

Calculations and basis of permit limitations are found at Appendices A-1 (Phase I) and A-2 (Phase II). See below for site-specific considerations.

**Site-Specific Consideration(s)**

Please note Appendices A-1, A-2, A-3, and A-4.

3. Outfall 501 - Sanitary Wastewaters

Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Appendices B (Areawide Sanitary Effluent Limits Policy) and C (Statewide Sanitary Effluent Limits Policy), as applicable. Concentration limits are used in accordance with LAC 33:IX.2707.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express $BOD_5$ and TSS in terms of concentration. According to the Statewide Sanitary Effluent Limitations Policy, dischargers to the Mississippi River shall receive limitations equivalent to secondary treatment. The following limitations shall apply:

| Parameter | Monthly Average mg/L | Weekly Average mg/L |
|---|---|---|
| Flow, MGD | N/A | Report |
| $BOD_5$ | 20 | 30 |
| TSS | 20 | 30 |
| Fecal Coliform colonies/100 ml | 200 | 400 |

4. Outfall 601 - Stormwater, Utility Wastewaters, and previously tested sanitary wastewater

Uncontaminated or low potential contamination stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). Utility wastewaters including cooling tower blowdown, utility water blowdown, overflow, pipe bleeds, and steam and air condensates, being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

Flow - Report
TOC - 50 mg/L, daily max
Oil and Grease - 15 mg/L, daily max

5. Outfall 002 - Stormwater

Uncontaminated or low potential contamination stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). The following limitations shall apply:

| | | |
|---|---|---|
| Flow - Report | | |
| TOC - 50 mg/L, daily max | | |
| Oil and Grease - 15 mg/L, daily max | | |
| pH, Std. Units | 6.0 (min) | 9.0 (max) |

In accordance with LAC 33:IX.2707.I.3 and 4 [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

6. Outfall 004 - Process Wastewaters

Syngenta Crop Protection, Inc., St. Gabriel Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

| Manufacturing Operation | Guideline |
|---|---|
| Organic Pesticides | 40 CFR 455 Subpart A |

Calculations and basis of permit limitations are found at Appendix A-3.

7. Outfall 011 - Sanitary Wastewater and Cooling Tower Blowdown

Outfall 011 will receive BPJ limitations based on the previously issued permit (LA0095478, Zeneca, Outfall001). The following limitations shall apply:

| Parameter | Monthly Average mg/L | Daily Maximum mg/L |
|---|---|---|
| Flow, MGD | Report | Report |
| TOC | N/A | 75 |
| TSS | N/A | 45 |
| Oil and Grease | N/A | 15 |
| Fecal Coliform colonies/100 ml | N/A | 400 |
| pH, Std. Units | 6.0 (min) | 9.0 (max) |

8. Outfall 012 - Stormwater and Hydrostatic Test Discharges

Uncontaminated or low potential contamination stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). Hydrostatic test discharges will receive limitations based on the General Hydrostatic Test Permit (LAG670000). The following limitations shall apply:

| Parameter | Monthly Average mg/L | Daily Maximum mg/L |
|---|---|---|
| Flow, MGD | Report | Report |
| TSS * | N/A | 90 |
| Benzene * | N/A | 50 $\mu$g/L |
| Total BTEX * | N/A | 250 $\mu$g/L |
| Total Lead * | N/A | 50 $\mu$g/L |
| TOC | N/A | 50 |
| Oil and Grease | N/A | 15 |
| pH, Std. Units | 6.0 (min) | 9.0 (max) |

* To be tested only during times of discharge of hydrostatic test water.

9. Outfall 013 - Groundwater Recovery Unit

Treated recovered groundwater that is discharged to discrete outfall(s) (internal or external) shall receive BPJ limitations. Organic toxics shall receive BPJ limitations based on OCPSF guidelines subpart J. The selection of toxic pollutants was based on the "Amended Corrective Action Plan" submitted to OWR, LDEQ on July 2, 1996. The above limitations are based on the previously issued NPDES Permit (LA0095478, Zeneca, Outfall 003). The following limitations shall apply:

| Parameter | Monthly Average mg/L | Daily Maximum mg/L |
|---|---|---|
| Flow, MGD | Report | Report |
| TOC | N/A | 50 |
| Chloroform | N/A | 325 $\mu$g/L |
| Toluene | N/A | 74 $\mu$g/L |
| Trichloroethylene | N/A | 69 $\mu$g/L |
| pH, Std. Units | 6.0 (min) | 9.0 (max) |

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

Hexachlorobenzene - placed on Outfall 301

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana

Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

**TMDL Waterbodies**

Outfall 001 - Subsegment 070301, Mississippi River - from Monte Sano Bayou to Head of Passes, is not listed on LDEQ's Final 2004 303(d) List as impaired, and to date no TMDL's have been established. A reopener clause will be established in the permit to allow for the requirement of more stringent effluent limitations and requirements as imposed by any future TMDLs.

Outfall 002 - The discharge from outfall 002, non-process area stormwater, is to Bayou Braud, Segment No. 040201. Bayou Braud is listed on the 303(d) report as being impaired with Phosphorus, Nitrogen (Nitrate + Nitrite as N), Organic enrichment/low DO, pathogen indicators, chlorides, sulfates, and tds. A TMDL is scheduled to be completed by March 2011. Based on the evaluation of the effluent discharges and water quality analysis along with the type and nature of the intermittent discharges, it was determined that the facility does not have the potential to discharge the listed pollutants into the receiving water body.

Monitoring frequencies for water quality based limited parameters are established in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall(s) 001 are as follows:

| TOXICITY TESTS | FREQUENCY |
|---|---|
| Acute static renewal 48-hour definitive toxicity test using Daphnia pulex | 1/year |
| Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas) | 1/year |

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine

Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.17%, 0.13%, 0.09%, 0.07%, and 0.05%. The low-flow effluent concentration (critical dilution) is defined as 0.13% effluent.

E. MONITORING FREQUENCIES

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(i)]. The following section(s) explain the rationale for the monitoring frequencies stated in the draft permit.

1. Outfall 001 - Combined flows of Internal Outfalls 301, 501, & 601

Flow and pH shall be monitored continuously.

2. Outfall 301 - Process Wastewaters

Flow shall be monitored continuously.
The following pollutants are to be monitored 3 times/week.

Parameter(s):
TSS
Ammonia as N

The following pollutants are to be monitored 1 time/week.

Parameter(s):
CBOD

TOC
TRC

A monitoring frequency of 1/week for the following listed toxic pollutants is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

Parameter(s):
Total Cyanide
Amenable Cyanide
Benzene
Carbon Tetrachloride
Chlorobenzene
Chloroethane
Chloroform
Ethylbenzene
Methylene Chloride
Toluene
2-Nitrophenol
Phenol
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Atrazine
Propazine
Simazine
Terbuthylazine
Norflurazon

A monitoring frequency of 1/month for the following listed toxic pollutants (metals) is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

Parameter(s):
Total Zinc (Phase I only)

A monitoring frequency of 2/year for the following listed toxic pollutant is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

Parameter(s):
Hexachlorobenzene

Toxic pollutants not expected to be on-site are proposed to be monitored once per year.

3. Outfall 501 - Sanitary Wastewater

Sanitary wastewater being discharged at discrete outfall(s), the monitoring frequency of sanitary wastewater follows LDEQ's sanitary general permits which are based on flow ("X" = Amount of Flow).

Class III, <= X <50,000 gpd - All parameters, 1/month

4. Outfall 601 -Stormwater, Utility Wastewaters, and previously tested sanitary wastewater

Stormwater and utility wastewater pollutants being discharged to discrete outfalls shall receive monitoring frequencies according to the following schedule:

All parameters - 1/month, when discharging

5. Outfall 002 - Stormwater

Non-process area stormwater that is uncontaminated or has a low potential of contamination and is discharged at a discrete outfall, will receive monitoring frequencies according to the following schedule:

All parameters - 1/quarter, when discharging

6. Outfall 004 - Process Wastewaters

Flow and pH shall be monitored continuously.
The following pollutants are to be monitored 3 times/week.

Parameter(s):
TSS
BOD

The following pollutants are to be monitored 1 time/week.

Parameter(s):
TOC

A monitoring frequency of 1/month for the following listed toxic pollutants (metals) is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7.

Parameter(s):
Total Chromium
Total Copper
Total Lead
Total Nickel
Total Zinc
Total Mercury
Arsenic

Toxic pollutants not expected to be on-site are proposed to be monitored once per year.

7. Outfall 011 - Sanitary Wastewater and Utility Wastewater

Flow and pH shall be monitored continuously.
The following pollutants are to be monitored 2/month.

Parameter(s):
Oil & Grease
TOC

The following pollutants are to be monitored once every 3 months.

Parameter(s):
TSS
Fecal Coliform

8. Outfall 012 - Stormwater and Hydrostatic Test Water

Flow and pH shall be monitored weekly.
The following pollutants are to be monitored 1/event.

Parameter(s):
TSS
Benzene
Total BTEX
Total Lead

The following pollutants are to be monitored once every 2 months.

Parameter(s):
Oil & Grease
TOC

9. Outfall 013 - Groundwater Recovery Unit

Flow and pH shall be monitored weekly.
The following toxic is to be monitored weekly.

Parameter(s):
Toluene

The following pollutants/toxics are to be monitored once every 2 months.

Parameter(s):
TOC
Chloroform
Trichloroethylene

**X. Compliance History/DMR Review:**
the following excursions were found (DMR review from 1/2003 - 12/2004) from Permit LA0095478. No excursions were found during this period for permit LA0005487.

| Date | Parameter | Outfall | Reported Value | Permit Limits |
|---|---|---|---|---|
| 3/2004 | TSS | 001 | 54 | 45 |
| 6/2003 | Fecal Coliform | 001 | 7500 | 400 |

## XI. Endangered Species:

The receiving waterbody, Subsegment 070301 of the Mississippi River Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which is listed as endangered species. This permit has not been submitted to the FWS for review in accordance with a letter dated September 29, 2004 from Watson (FWS) to Gautreaux (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. Effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The more stringent of technology and water quality based limits (as applicable) have been applied to ensure maximum protection of the receiving water.

The receiving waterbody, Subsegment 040201 of the Lake Pontchartrain Basin is not listed in Section II.2 of the Implementation Strategy as requiring consultation with the U.S. Fish and Wildlife Service (FWS).

## XII. Historic Sites:

The discharge is from an existing facility location, which does not include an expansion on undisturbed soils. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

## XIII. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to reissue a permit for the discharge described in the application.

## XIV. Variances:

No requests for variances have been received by this Office.

## XV. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in: Local newspaper of general circulation and the Office of Environmental Services Public Notice Mailing List